

WHAT IS CLAIMED IS:

1. A mobile station comprising:

measuring means for measuring received levels of a serving cell and each neighboring cell thereto;

5 determining means for determining cell types of the current and neighboring cells; and

selecting means for selecting a cell as a reselection target, based on the received levels measured by the measuring means and the cell types determined by the determining means.

10 2. The mobile station according to Claim 1, wherein the selecting means changes a cell reselection condition or priority for selection between cell types, according to the cell type of the serving cell determined by the determining means.

15 3. The mobile station according to Claim 2, wherein the selecting means changes the cell reselection condition, according to the cell type of the neighboring cell determined by the determining means.

20 4. The mobile station according to Claim 1, comprising:

storing means for storing the cell types in relation with cell classes;

counting means for counting the number of reselections between cells of different cell classes; and

25 changing means for changing the relation between the cell types and the cell classes in the storing means to another

when the number of reselections counted by the counting means exceeds a predetermined value.

5. A mobile communication system comprising:

a mobile station comprising

5 measuring means for measuring received levels of a serving cell and each neighboring cell thereto,

determining means for determining cell types of the current and neighboring cells, and

10 selecting means for selecting a cell as a reselection target, based on the received levels measured by the measuring means and the cell types determined by the determining means; and

15 a base station for notifying the mobile station of information enabling identification of a cell type of its own cell or identification of cell types of its own cell and each neighboring cell thereto.

6. A cell selection method comprising:

20 a measuring step wherein measuring means of a mobile station measures received levels of a serving cell and each neighboring cell thereto;

a determining step wherein determining means of the mobile station determines cell types of the current and neighboring cells; and

25 a selecting step wherein selecting means of the mobile station selects a cell as a reselection target, based on the received levels measured by the measuring means and the

cell types determined by the determining means.

7. The cell selection method according to Claim 6, comprising:

5 a counting step wherein counting means counts the number of reselections between cells of different cell classes; and

10 a changing step wherein changing means changes a relation between the cell types and the cell classes in storing means to another when the number of reselections counted by the counting means exceeds a predetermined value.

15 8. The cell selection method according to Claim 7, wherein in the changing step the changing means changes the relation between the cell types and the cell classes in the storing means to another when the number of reselections exceeds the predetermined value within a predetermined time from a point of a start of counting the number of reselections.

20 9. The cell selection method according to Claim 7, wherein in the changing step, on the occasion of changing the relation between the cell types and the cell classes, the changing means brings the relation back to that before the changing after a lapse of a predetermined time from a point of the changing.

25 10. The mobile station according to Claim 1, further comprising choosing means for choosing neighboring cells for each of which a received level is measured,

wherein the measuring means measures received levels

of neighboring cells after chosen by the choosing means.

11. A mobile station comprising:

storing means for storing information about a radio channel;

5       choosing means for choosing neighboring cells for each of which a received level is measured;

measuring means for measuring received levels of a serving cell and each neighboring cell after chosen by the choosing means, out of the neighboring cells to the serving cell;

10       determining means for determining cell types of the current and chosen neighboring cells; and

selecting means for selecting a cell as a reselection target, based on the received levels measured by the measuring means and the cell types determined by the determining means.

15       12. The mobile station according to Claim 11, wherein a cell reselection condition includes at least one of the following reselection conditions:

20       a reselection condition that the target cell is determined to be a neighboring cell with the highest received level out of neighboring cells satisfying a predetermined received level when the received level of the serving cell becomes below a predetermined first threshold;

25       a reselection condition that the target cell is determined to be a neighboring cell a difference of the received level of which from that of the serving cell exceeds

a predetermined hysteresis and which has a highest received level;

5 a reselection condition that the target cell is determined to be a neighboring cell which keeps the received level high for a predetermined time, regardless of the received level of the serving cell; and

10 a reselection condition that, when a variation per unit time of the received level of the serving cell exceeds a predetermined second threshold, the target cell is determined to be a neighboring cell with the highest received level out of neighboring cells the received level of each of which exceeds a predetermined third threshold.

13. A cell selection method comprising:

15 a storing step wherein storing means of a mobile station stores information about a radio channel;

a choosing step wherein choosing means of the mobile station chooses neighboring cells for each of which a received level is measured;

20 a measuring step wherein measuring means of the mobile station measures received levels of a serving cell and each neighboring cell after chosen by the choosing means, out of neighboring cells to the serving cell;

25 a determining step wherein determining means of the mobile station determines cell types of the current and chosen neighboring cells; and

a selecting step wherein selecting means of the mobile

station selects a cell as a reselection target, based on the received levels measured by the measuring means and the cell types determined by the determining means.

14. The cell selection method according to Claim 13, wherein a cell reselection condition includes at least one of the following reselection conditions:

a reselection condition that the target cell is determined to be a neighboring cell with the highest received level out of neighboring cells satisfying a predetermined received level when the received level of the serving cell becomes below a predetermined first threshold;

a reselection condition that the target cell is determined to be a neighboring cell a difference of the received level of which from that of the serving cell exceeds a predetermined hysteresis and which has a highest received level;

a reselection condition that the target cell is determined to be a neighboring cell which keeps the received level high for a predetermined time, regardless of the received level of the serving cell; and

a reselection condition that, when a variation per unit time of the received level of the serving cell exceeds a predetermined second threshold, the target cell is determined to be a neighboring cell with the highest received level out of neighboring cells the received level of each of which exceeds a predetermined third threshold.